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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/730,185

12/05/2000

Zoran Falkenstein

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04/19/2005

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EXAMINER

TRAN, THUY V

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/730,185	FALKENSTEIN, ZORAN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thuy V. Tran	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-7 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This is a reply to the Applicant's amendment submitted on January 31<sup>st</sup>, 2005. In virtue of this amendment:

- Claims 2, 8, and 9-16 were previously canceled;
- Claims 17-19 are newly added; and thus,
- Claims 1, 3-7, and 17-19 are now presented in the instant application.

#### *Claim Rejections - 35 USC § 102/103*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Eliasson et al. (U.S. Patent No. 4,945,290).

With respect to claim 17, Eliasson et al. discloses, in Fig. 1, a dielectric barrier discharge-driven light source comprising (1) a first flat panel [1] and second flat panel [2] dielectric barriers which enclose a gas (see col. 3, lines 62-64), wherein the first flat panel barrier [1] is substantially parallel with the second flat panel dielectric barrier [2], (2) a first electrode [5] positioned on an outside portion of the first flat panel dielectric barrier [1] such that the first electrode [5] is positioned in a plane substantially parallel to the first flat panel dielectric barrier, (3) a second electrode [6] positioned on an outside surface of the second flat panel dielectric barrier such that the second electrode [6] is positioned in a plane substantially parallel to the second flat panel dielectric barrier, and (4) support stems [3] disposed between the first and

Art Unit: 2821

second flat panel dielectric barriers and coupled to the first and second flat panel dielectric barriers.

With respect to claim 18, Eliasson et al. discloses that the stems are arranged to resist stresses placed on the first and second flat panel dielectric barriers when a pressure between the first and second flat panel dielectric barriers is other than atmospheric pressure (see Fig. 1; col. 3, lines 47-51; col. 4, line 21).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 5-6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Eliasson et al. (U.S. Patent No. 4,945,290).

With respect to claim 1, Eliasson et al. discloses, in Fig. 1, a dielectric barrier discharge-driven light source comprising (1) a first flat panel [1] and second flat panel [2] dielectric barriers which enclose a gas (see col. 3, lines 62-64), wherein the first flat panel barrier [1] is substantially parallel with the second flat panel barrier [2] and has length and width dimensions substantially greater than a distance between the first and second panel dielectric barriers (see col. 3, lines 46-51), (2) a first electrode [5] coupled to an outside portion of the first flat panel dielectric barrier [1] and a second electrode [6] coupled to the second flat panel dielectric barrier [2] (see Fig. 1), and (3) stems [3] disposed between the first and second flat panel dielectric barriers and coupled to the first and second flat panel dielectric barriers. Eliasson et al. does not

Art Unit: 2821

teach or specify the employment of transfer foil technology via which the stems are coupled to the first and second flat panel dielectric barriers. However, this difference is not of patentable merit since all the techniques including the transfer foil technology and other techniques such as adhesive bonding, mechanical fastening, or welding, etc. have a capability of bonding parts/elements together, and that of producing the same product with such bonding. Such bonding connection is believed not to affect the lighting performance of the light source. Furthermore, the techniques for coupling the parts/components of the device are not germane to the patentability of the device/product itself. Therefore, to employ the transfer foil technology or other techniques for coupling the stems to the first and second flat panel dielectric barriers of the light source of Eliasson et al. upon a particular application or environment of use would have been deemed obvious to a person skilled in the art of dielectric barrier discharge lamp fabrication.

With respect to claim 5, Fig. 1 of Eliasson et al. shows that the stems [3] are equidistant.

With respect to claim 6, Eliasson et al. discloses that the second electrode [6] is a mesh (see col. 3, lines 51-54).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2821

6. Claims 3-4 and 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Eliasson et al. (U.S. Patent No. 4,945,290).

With respect to claim 3, Eliasson et al. discloses all of the claimed subject matter, as expressly recited in claim 1, except for the first and second flat panel dielectric barriers having a circular shape. However, such a difference in shape is not of patentable merit since it does not change the lighting operation of the device. It merely involves with a selection of design choices. Therefore, to modify the device of Eliasson et al. by changing the shape of the first and second dielectric flat panel dielectric barriers of Eliasson et al. from rectangular to circular to accommodate with a particular application or environment of use would have been deemed an obvious development to a person skilled in the art.

With respect to claim 4, Eliasson et al. discloses all of the claimed subject matter, as expressly recited in claim 1, including specifying that the stems [3] (or spacers [3]) are of insulating material (see col. 3, lines 48-49), but does not specifically state that the stems be comprised of quartz. However, quartz (or quartz glass) has been well known in the art as an insulating material that can be used with minimal corrosion effect caused by the discharge gas (see prior art of record to Matsuno et al.; col. 9, lines 38-43). Therefore, for such an advantage, to make the stems of Eliasson et al. in quartz would have been deemed obvious to a person skilled in the art.

With respect to claim 7, Eliasson et al. discloses all of the claimed subject matter, as expressly recited in claim 1, except for the first and second flat panel dielectric barriers being comprised of silica. However, silica has been well known as a high dielectric-strength insulating material used for charge leaking prevention. Therefore, to make the first and second flat panel

Art Unit: 2821

dielectric barriers of Eliasson et al. in silica to prevent the dielectric discharge device from a leakage of charge would have been deemed obvious to a person skilled in the art.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over The First Embodiment of Eliasson et al. (U.S. Patent No. 4,945,290) in view of The Second Embodiment of Eliasson et al. (U.S. Patent No. 4,945,290).

With respect to claim 19, The First Embodiment (Fig. 1) of Eliasson et al. discloses all of the claimed subject matter, as expressly recited in claim 1, except for cylindrical stems disposed between the first and second flat panel dielectric barriers.

The Second Embodiment (Fig. 2) of Eliasson et al. discloses cylindrical stems [10] disposed between first and second dielectric barriers [8, 9].

It would have been obvious to one of ordinary skills in the art at the time of the invention to modify the First Embodiment (Fig. 1) of Eliasson et al. by reshaping the stems from rectangular to cylindrical as taught in The Second Embodiment (Fig. 2) of Eliasson et al. to accommodate with a particular application or environment of use since such reshaping the stems is believed not affect the discharge space created between the dielectrics.

***Citation of relevant prior art***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Matsuno et al. (U.S. Patent No. 5,444,331) discloses a dielectric barrier discharge lamp.

Art Unit: 2821

Prior art Eliasson et al. (U.S. Patent No. 5,173,638) discloses a high power radiation source.

Prior art Eliasson et al. (U.S. Patent No. 4,851,734) discloses a high power radiation source.

Prior art Eliasson et al. (U.S. Patent No. 4,837,484) discloses a high power radiation source.

***Remarks and conclusion***

9. Applicant's arguments with respect to claims 1 and 4 have been considered but are moot in view of the new ground(s) of rejection.

Claim 1 and its dependent claims 4-6 are now rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the teachings of a newly found prior art Eliasson et al. (U.S. Patent No. 4,945,290). See details of the rejections set forth in this Office Action.

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

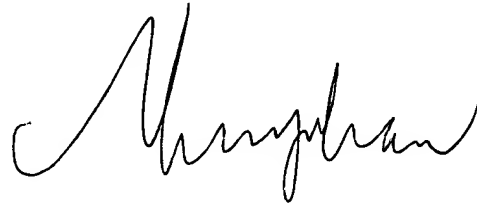
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Art Unit: 2821

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

04/17/2005

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is written in a cursive style.

**THUY V. TRAN  
PRIMARY EXAMINER**